

CLAIMS

## WHAT IS CLAIMED IS:

1. A method of scheduling a future event comprising:  
receiving first event data including a first time at which a first  
5 event is to occur;  
creating a first data structure comprising a plurality of elements  
corresponding to a plurality of time windows of a first duration;  
associating said first event with a one of said first data structure  
elements, said first time falling within the time window corresponding to said  
10 one of said first data structure elements;  
receiving second event data including a second time at which a  
second event is to occur, said second time not being in any time window  
represented by an element of said first data structure;  
creating a second data structure comprising a plurality of  
15 elements corresponding to a plurality of time windows of a second duration; and  
associating said second event with a one of said second data  
structure elements, said second time falling within the time window  
corresponding to said one of said second data structure elements.
- 20 2. The method of scheduling a future event of claim 1, wherein  
said first data structure comprises an array.
3. The method of scheduling a future event of claim 1, wherein  
said second data structure comprises an array.
- 25 4. The method of claim 1, further comprising:  
associating said second event with a second one of said  
first data structure elements.

5. The method of claim 4, wherein said act of associating said second event with a second one of said first data structure elements occurs after all time windows represented by said first data structure have expired.

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6. The method of claim 1, wherein said second duration is greater than said first time duration.

7. The method of claim 6, wherein each time window of said second duration comprises a period of time represented by the aggregate of all time windows in said first data structure.

8. The method of claim 1, wherein each of said first data structure elements comprises a list pointer, and wherein said associating act comprises:

adding to a list associated with said one of said first data structure elements a list element indicative of said first event.

9. The method of claim 8, wherein said linked list pointer comprises an empty list.

10. The method of claim 8, wherein said list comprises a doubly linked list.

11. The method of claim 1, further comprising the act of:

initiating the events associated with a first one of said elements; and

repeating said initiating act for successive ones of said elements at a pre-determined time interval.

12. The method of claim 11, wherein said pre-determined time  
5 interval is said first duration.

13. The method of claim 1, wherein said first data structure  
comprises an array in which said first data structure elements are arranged in an  
order, and wherein said method further comprising the acts of:  
10 setting a pointer to point to a first one of said first data  
structure elements;  
repeatedly advancing said pointer to successive ones of  
said first data structure elements at a pre-determined time interval.

14. The method of claim 13, wherein said advancing act  
15 comprises:  
wrapping said pointer to a beginning element in said order.

15. A computer-readable medium having computer-executable  
20 instructions to perform the method of claim 1.

16. A system for scheduling future events comprising:  
a first data structure comprising a plurality of elements,  
each of said elements corresponding to a time window having a duration; and  
25 a scheduling module which receives event data including a  
time at which an event is to occur, and which associates said event data with a  
one of said elements, said time being within the time window corresponding to  
said one of said elements.

17. The system of claim 16, wherein said first data structure comprises an array.

5           18. The system of claim 16, wherein each of said elements comprises a list pointer, and wherein said scheduling module adds said event data to a list pointed to by said one of said elements.

10           19. The system of claim 16, wherein said list comprises a linked list.

20           20. The system of claim 16, further comprising:  
              a second data structure which corresponds to a time duration subsequent to any of the time windows corresponding to the elements of said first data structure;

20           wherein said scheduling module receives second event data including a second time at which a second event is to occur and associates said second event data with said second data structure, said second time not being within any of the time windows corresponding to the elements of said first data structure.